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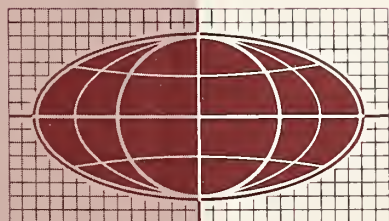
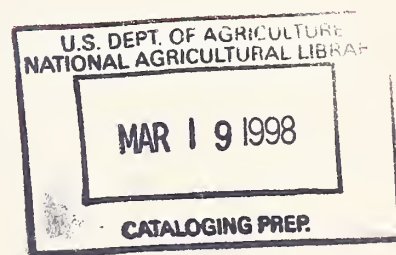
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# THE AGRICULTURAL ECONOMY AND TRADE OF DENMARK



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Basic Economic and Political Information: Population, 4.9 million, or about 290 inhabitants per square mile. Capital, Copenhagen. Gross National Product in 1967, \$13.2 billion (current prices). Gold reserves as of June 1968, \$113 million. Exchange rate as of June 1968, 7.496 kroner per U.S. dollar, or 1 kroner = 13.3 cents. Government, Constitutional Monarchy. Legislative power is vested in the King (Frederick IX) and the Folketing (Parliament). Prime Minister, Mr. Hilmar Baunsgaard. The Social Democrats were the governing party from 1953 to 1967. In 1967, the Social Democratic Party, which subscribes to evolutionary, democratic socialism, lost its governing status to a coalition of the Conservatives, the Radical Liberals, and the Moderate Liberals. These three parties favor a more subdued role of state socialism.

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## SUMMARY

With a "shift" of resources into industrial production since World War II, the Danish economy has experienced rapid growth. By the late 1950's, industrial exports were greater than agricultural exports, a trend which has not changed. In recent years, problems resulting from rapid development have occurred. Inflation has been critical, agricultural labor has been periodically scarce, and metropolitan areas have experienced housing shortages. Increased incomes have resulted in higher imports of consumer goods, worsening the balance-of-trade deficits since 1960. Restrictive economic policy has been used in recent years by the Danish Government in an attempt to hold down inflation. Since 1967, growth rates have declined, due to the effects of various internal policies and the lack of activity among Danish trading partners.

Patterns of land use have not changed rapidly in Denmark. The agricultural area represents about three-fourths of total land area. A slight decline in area for agriculture is occurring because of increasing competition for land from industry. Total arable land has declined since 1960, with less land planted to potatoes, sugarbeets, and other root crops. Area for grass and forage has also declined. Since 1960, sharp area and production declines for rye and mixed grains have been offset by increases in area and production of barley, Denmark's most important grain. Barley production increased by 50 percent in the 1960-67 period. Both area and production of wheat have trended downward since the mid-1960's.

Production of livestock products, particularly pork, dominates total agricultural out-

put. Beef and veal production is small compared to pork production, but has increased in recent years. Hog numbers rose to a record high of 8.6 million in 1965 and have fluctuated at high numbers since then; cattle herds, totaling about 3.3 million in 1967, are gradually declining--largely because of reduced cow numbers.

Denmark, generally self-sufficient in principal foods, imports feed grains, oilseeds and oils, and tropical products. The United States continues to be the major source of agricultural goods to Denmark, supplying about 25 percent of Danish agricultural imports in normal years. Soybeans and tobacco are the principal commodities purchased by Denmark from the United States.

Agricultural exports continue to be heavily dominated by pork products and butter. Trade has been concentrated in two major markets, the United Kingdom, a European Free Trade Association (EFTA) partner, and West Germany, a member of the European Economic Community (EEC). High tariff walls imposed by the EEC since 1962 have contributed significantly to declines in Danish exports to the EEC of poultry, eggs, beef, veal, and live animals. Denmark is attempting to improve agricultural export prospects by diversifying markets. Denmark applied for membership in the EEC in 1967, but membership is not anticipated in the near future. Government support to farmers has increased since 1960, as farm revenues have not improved relative to nonfarm revenues--due to lower overall export earnings and increased costs. Prior to the early 1960's, the Danish farm sector was relatively independent from Government support.





# THE AGRICULTURAL ECONOMY AND TRADE OF DENMARK

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## THE ECONOMIC SITUATION

Postwar economic growth in Denmark, particularly after 1958, has been generally rapid. The Danish Government guided development during the late 1950's by encouraging the inflow of foreign capital and by liberalizing import restrictions on raw materials necessary for industrial production. Demand for Danish industrial products in Western Europe has stimulated the export sector, and since the late 1950's, the total value of industrial exports has exceeded that of agricultural exports.

Rates of growth in real gross national product averaged over 5 percent in the early 1960's, but declined to about 3.5 percent in 1967--reflecting sluggish economic activity throughout Western Europe. Resumption of growth in Denmark usually depends upon improvement in the economies of Denmark's major trading partners: the United Kingdom, Sweden, and West Germany.

Trade is essential to the economic health of Denmark. The value of imports, as well as exports, each are equal to around one-fourth of GNP compared with about 5 percent for the United States. Because raw materials such as fuels and basic metals are virtually nonexistent in Denmark, substantial imports are necessary. Imports of both raw materials and semimanufactured goods are necessary for manufacturing the finished, quality goods upon which export earnings depend. The principal Danish exports are machines, diesel engines, instruments, textiles, meat and dairy products, hides and skins, and fish products.

Several effects of increased business activity and rapid industrialization have occurred in Denmark in recent years. Inflation has been a critical problem, particularly because Danish prices must be competitive in export markets. From 1964 to 1967, the cost-of-living index in Denmark increased more than in other industrial countries in Western Europe. This index was 153 in 1967, compared with 100 in 1958. In an attempt to reduce inflation, the Government relies primarily on monetary policy to dampen private consumption.

In addition to monetary intervention, certain fiscal measures have been taken. For several years, a general sales tax of 12.5 percent was in effect. In 1967, it was replaced by a "value-added" tax which is levied on a wide variety of goods and services at all stages of production and distribution. This tax has contributed to a decline in total consumption.

A secondary effect of industrialization has been the migration of labor from rural to urban centers and a resultant shortage in housing. Public investment in building projects has expanded rapidly, but housing in metropolitan areas is still scarce.

The trade account of the balance of payments--excluding revenues from such items as services and tourism--generally has large deficits. In 1967, the trade deficit was over \$450 million, the largest since 1961. To stimulate exports, the Danes followed their

principal trading partner, the United Kingdom, and devalued the kroner by 7.9 percent in 1967. (This devaluation was about half the United Kingdom's devaluation.) The anticipated long-run effects of the devaluation may be weakened

if the continuing wage price spiral in Denmark is not controlled. The Government has attempted to encourage policies similar to the U.S. "guidelines" recommending that wage increases be linked to productivity increases.

## PHYSICAL ENVIRONMENT

Continental Denmark, excluding the Faroe Islands and Greenland, comprises 500 islands, of which 100 are populated, and the Jutland peninsula. Jutland contains about half of Denmark's total land area, and borders Germany for 42 miles. The entire country is about one-third the size of Iowa and covers a land area of over 16,500 square miles. Despite Denmark's relatively small total land area, its coast--consisting of thousands of small inlets and fjords--is more than 4,600 miles long. Denmark's geography, linking Scandinavia with the European Continent, has made it a natural commercial and shipping center.

Denmark is a low-lying country characterized by undulating, rolling terrain. The highest point is about 570 feet above sea level. The land is not suited for highly diversified agricultural production, although the principal grains grow without difficulty throughout the land.

The gray-brown podzolic soils common in eastern Denmark are among the most fertile in the country. They are intensively cultivated and very responsive to fertilizers.

The brown podzolic soils common in western and northern Denmark are less fertile than the gray-brown and are used for crops, pasture, and woodland. The sandy soils, the bog soils, and the clay soils--most common in coastal areas--are generally untilled. However, land reclamation projects, mechanical improvements, and fertilization have brought some of these soils back into cultivation in recent years.

Denmark is part of the deciduous forest chain and is near the border of the coniferous belt. In addition to deciduous fruit trees, beech, oak, elm, and linden trees are common in Denmark.

The number of days with precipitation is relatively high, ranging from 120 to 200 a year. The rainfall is generally evenly distributed throughout the country. August, a harvest month, has the highest rainfall. Dry spells in May or June sometime hinder the growth of certain crops. Denmark is warmed by the Gulf Stream. The mean temperature of the coldest month (February) is 32° F and of the warmest (July), 62° F.

## LAND USE

The total agricultural area covers about 3 million hectares, or roughly three-fourths of the total land area. About 10 percent of the total land area is forest, and 5 percent, heath, moorland, and lakes. As seen in table 1, about 60 percent of the total arable land is sown to grains, and 15 percent to root crops; grass and forage compose about 20 percent. Approximately 10 percent of the total agricultural area is permanent grassland.

By 1967, area declines were notable for wheat and rye, and mixed grains, reversing their upward postwar trend. However, acreage sown to barley, by far Denmark's most important grain, has increased sharply. By 1966, barley acreage had increased over 80 percent from 1955, and covered about 70 percent of total grain area (table 1). Oat acreage, which declined from 1955 to 1960, increased significantly during 1960-66. Mod-



ifications in grain support programs have encouraged a trend towards diverting area from wheat and rye into barley.

Table 1 indicates a downtrend since 1960 in area used for root crops, particularly sugarbeets for feed--the principal crop in this category. Acreage used for sugarbeets

for refining increased until 1964 but has declined since that time. Due largely to a scarcity of labor and decreasing consumption, potato area has continually declined since the 1950's. In 1966, potato area totaled 40,000 hectares, compared with 93,000 in 1955 (table 1). However, further reduction is not likely.

Table 1.--Denmark: Use of agricultural land, selected years

Type of crop	1955	1960	1964	1966
- - <u>1,000 hectares</u> - -				
Grains:				
Wheat.....	67	82	128	94
Rye.....	77	157	93	47
Barley.....	611	756	950	1,112
Oats.....	266	198	211	234
Mixed grains.....	306	252	186	119
Total grains.....	1,327	1,445	1,568	1,606
Pulses.....	6	8	6	3
Root crops:				
Potatoes.....	93	92	54	40
Sugarbeets for sugar.....	57	55	84	58
Sugarbeets for feed.....	185	209	167	156
Other <u>1</u> /.....	234	212	153	138
Total root crops.....	569	568	458	392
Grass and forage.....	701	637	570	560
Other crops (seed, hemp, etc.).....	91	80	90	93
Fallow land.....	7	4	4	3
Total arable land.....	2,701	2,742	2,696	2,657
Permanent grassland.....	392	343	328	326
Total agricultural area <u>2</u> /.....	3,093	3,085	3,024	2,983

1/ Largely rutabaga.

2/ Excludes private gardens and forests.

Source: Landbrugsstatistik (annual), The Statistics Department, Copenhagen.

Crop rotation is a common practice in Denmark. A 7- or 8-year rotation is normal. On good soils, the rotation may be oats, wheat, root crops, or barley, and then a period of grass with clover. Double cropping is not extensive. Labor scarcity, a periodic problem in Danish agriculture, is an important factor in crop rotations. Danish farmers may arrange rotations to minimize concentration of farmwork at certain periods.

## AGRICULTURE IN THE ECONOMY

Agriculture has declined in relative importance and in 1967 accounted for only about 8 percent of gross domestic product, compared with an average of about 18 percent in the mid-1950's. Nevertheless, agriculture continues to supply most of the nation's food requirements. Denmark is more than self-sufficient in total food production, and the only important foods which must be imported are fruits, certain oilseeds, and tropical products. Although generally self-sufficient in grains, Denmark imports rye and durum wheat irregularly, while barley and corn are imported annually (table 4). However, self-sufficiency in barley is expected by 1970.

The Danish farmer is highly dependent upon sales of livestock products. Since 1963, sales of livestock and livestock products, including dairy and poultry, have accounted for over 90 percent of agricultural sales. Total sales of livestock products and animals were about \$1.3 billion in 1967, about one-fourth above the 1961-62 average. Largely because of difficulties in export markets, the sales value of livestock products and animals is not expected to change significantly in the near future.

Cash receipts from farm marketings have not kept pace with operating costs in recent years. From 1964 to 1966, operating costs increased twice as much as gross receipts. Both labor and raw material costs contributed strongly to overall operating cost increases. At the same time, farm financing

The decline in total agricultural area in recent years is projected to continue into the 1970's; the reduction is largely due to losses of farmland to industrial and other nonagricultural uses. Declining area has been offset only slightly by reclamation of formerly unproductive areas.

was difficult--partly because of anti-inflationary tightening of the loan market.

The number of farms has declined since the late 1950's, particularly holdings under 10 hectares. The Government has encouraged this trend towards larger and fewer units. Legislation enacted in 1967 permitted amalgamation of agricultural holdings to a maximum area of 35 hectares (86 acres), although approval of holdings of up to 75 hectares (185 acres) may be granted in certain cases. The average size of a Danish farm in 1967 was approximately 16 hectares, or 40 acres.

Approximately 14 percent of Denmark's population live on farms. The family farm predominates, and family labor accounts for about one-third of the farm labor force. Small farms rarely have part-time or seasonal help. There has been a continuing decline in the agricultural labor force, particularly since 1955. By 1965, the total number of persons actively engaged in agriculture was about 210,000. Employed farm workers totaled about 58,000 in 1966, compared with an average of 103,000 during the 1960-64 period. Of the 1966 total, only about 3,000 were seasonal or part-time employees, compared with around 6,000 in 1960-64.

Denmark has achieved one of the world's highest levels of agricultural efficiency. The country's farmers are highly skilled and receive intensive technical education. Labor productivity doubled during the past decade,

and Danish farmers have steadily increased their usage of capital inputs. Total investment in farm machinery rose by 40 percent from 1960 to 1966. Most Danish farms have some farm machinery; however, many of the small farms rent machinery from cooperative machine stations (fig. 1).

## ORGANIZATIONS OF AGRICULTURE

### The Cooperatives

Originally formed in the late 19th century, the cooperatives were organized to unify Danish farmers and to accumulate rural capital. Since that time, their functions have expanded to include production, marketing, importing, exporting, purchasing, sales, and credit. Thus, farmers may enjoy the benefits of large scale production and distribution by joining cooperative associations, despite the small size of their farms. Today, virtually the entire agricultural sector is organized on a cooperative basis. The cooperatives are voluntary associations entirely governed by their members. About 90 percent of the total production of pork and milk is marketed through cooperative associations, and about 50 percent of eggs and poultry.

An important feature of the Danish cooperatives is that farmers may join several different local organizations which attend to their various farming needs. As seen in figure 1, a farmer may belong to a local Consumer Society, Cooperative Dairy, Machine Station, Poultry Slaughterhouse, Feeding Stuff Society--or any of the other specialized local societies. There are 12 local societies in all and each one is affiliated with one or several of 29 national organizations. All the cooperative organizations are supervised by the Central Cooperative Committee. As illustrated in figure 1, the local Cooperative Dairy, for example, is affiliated with several national organizations. They, in turn, frequently cooperate with one another. Thus, the farmer member may deliver his dairy products to the local cooperative, and an appropriate

Denmark ranks high in the use of mineral fertilizers. The Government has encouraged use of fertilizers by providing a small fertilizer subsidy. From 1963 to 1966, Danish consumption of phosphorous, potassium, and nitrogenous fertilizers per hectare increased by 9, 6, and 27 percent, respectively.

national cooperative handles marketing and distribution for either the home market or export.

The cooperatives are relatively free of direct Government control. However, exports undergo rigorous quality control by the Danish Government.

Two important characteristics of the cooperatives are that farmer members are legally obliged to deliver products for agreed-upon periods to the cooperatives (so export quotas may be met), and members must assume joint liability for the debts of the cooperative organization.

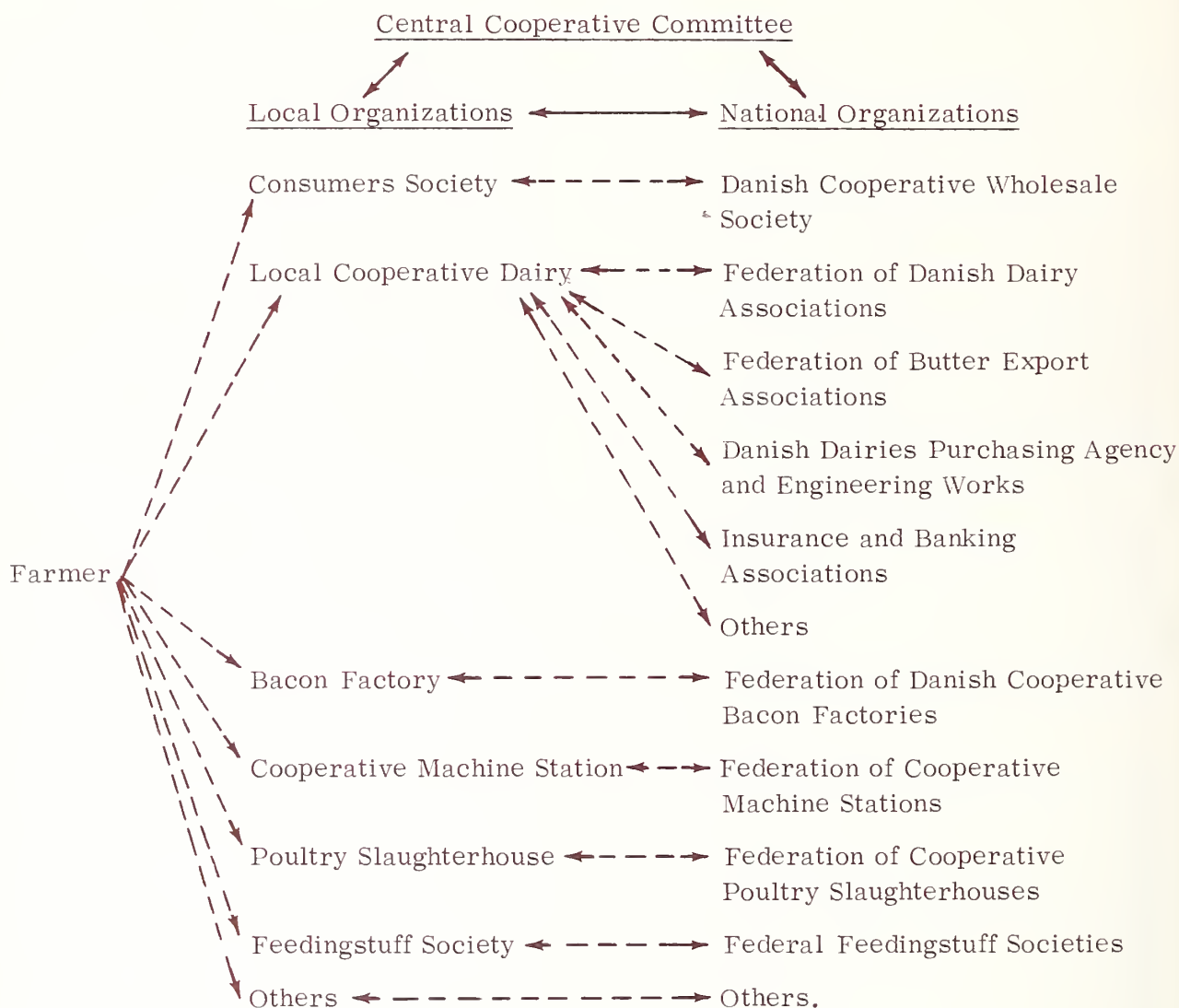
The main functional categories of the cooperatives are the Consumer Societies (wholesale and retail societies), the Production Societies (such as export associations and slaughterhouses), and Purchasing Societies (suppliers of seeds, fertilizers, feed, machinery, and other items). Credit associations, banks, and other institutions are integrated into the cooperative structure as well. The Cooperative Bank, Andelsbanken, is one of Denmark's four largest banks.

The Cooperative Export Associations work closely with commercial firms. One important commercial organization for cattle export is Oxexport, which buys directly from the cooperatives.

### Farmers' Unions and the Agricultural Council

Most Danish farmers are organized within either the National Farmers' Union or

# INTEGRATION BETWEEN REPRESENTATIVE LOCAL AND NATIONAL COOPERATIVE SOCIETIES IN DENMARK



Source: *Federal Danish Cooperative Societies, Central Cooperative Committee.*

Figure 1



the Federation of Danish Smallholders' Societies. The interests of the small number of large landowners are represented by the National Federation of Large Farmers' Unions.

An important coordinating organization, the Agricultural Council, deals with problems of general interest and represents agriculture as a whole in negotiations with the

Government. It consists of representatives of the National Farmer's Union and the co-operative societies. The Council also is comprised of the nine export boards for various commodities. A permanent committee of the Agricultural Council is the Danish Agricultural Marketing Board, which promotes the sale of farm products in Denmark and in export markets.

## AGRICULTURAL AND TRADE POLICY

Denmark is a member of several international groups which influence its trade policy. They include the European Free Trade Association, the Organization for Economic Cooperation and Development, the General Agreement on Tariffs and Trade, the International Monetary Fund, and the North Atlantic Treaty Organization. Denmark is a member of the Nordic Council and cooperates with many of its recommendations for harmonization of certain activities among the member countries. Denmark submitted an application for membership in the EEC in May 1967.

Prior to 1958, the Danish farmer was relatively independent from Government support because there were strong organizations protecting farmer's interests and there was a direct relationship between farm and export prices. However, Government support to agriculture has increased since the first Agricultural Marketing Act was enacted in 1958. This act is modified by similar biennial legislation. The 1958 act provided guaranteed producer prices for grains, thereby encouraging self-sufficiency, and established mixing regulations which required millers to use domestically produced grains in specified quantities. The ratio of domestically produced grains which must be used in making flour is 100 percent for both rye and wheat. The ratios may vary, depending upon the quantity and quality of domestic production.

In 1967, the guaranteed supports were replaced by a new program which supports

grains by fixed minimum import prices and variable levies.

The Agricultural Marketing Act of 1961 established a home market scheme, or a "two-price system" (so called because of the relationships between export and domestic prices) for pork, beef and veal, and poultry and eggs. The home market (wholesale) prices for these commodities are fixed periodically, according to production costs and export prices. Generally, the home market prices are higher than the export prices; however, the scheme was discontinued for beef and veal during 1963-66, when export prices were above the fixed minimum home market price. The producer price is a weighted average of prices the farmer receives for his exportable production, plus the home market price which he receives for goods sold domestically. For example, in 1966 the world market price for poultry was about 18 cents a pound, while the Danish home market price was 29 cents. The Danish producer price averaged about 21 cents. Home market price increases must be approved by the Government Monopoly Board. A similar scheme applies to dairy products, but this is privately implemented by the Federation of Dairy Associations.

The home market system is currently under review, and alternative programs are being considered by the Government in cooperation with the agricultural organizations. This system has been criticized as contributing to inflationary price increases and encouraging loss-incurring exports. If Den-

mark eventually joins the EEC, the provisions of the home market system would be inconsistent with EEC regulations. Nevertheless, the current Agricultural Marketing Act (applying to 1967/68 and 1968/69) continues the home market system.

A Disposal Fund financed by the Government is available for export promotion and storage programs and for price stabilization purposes. Since 1967, this fund has provided for subsidies to poultry producers for meat exported outside Europe. Some support, in addition to the home market levies, is granted to egg and poultry producers through a Grain Fund, financed from levies on imported grains. Grain exporters and cattle producers with small herds also receive some compensation via this fund.

In the past, milk subsidies were based entirely on cow numbers and the value of land holdings. In an effort to improve efficiency, a milk subsidy program was adopted in 1965. Instead of being based on the number of animals owned, the subsidies were determined by the butterfat content of the milk produced. As of 1967/68, supports were based on the value of production as well as on butterfat content. Small farms, however, received grants based on herd size beginning in 1968.

Other Government supports include small subsidies for fertilizer purchases, supports to rapeseed growers (replacing a scheme under which rapeseed was supported by the margarine price), and supports for domestic production of skim milk powder.

Export levies imposed on certain cheeses and butter are used for price equalization purposes. Rebates based on the quantity of canned meat exported to non-EFTA countries are granted producers.

Danish agriculture was once protected by extensive quantitative restrictions. The Government has liberalized import controls in recent years for selected cheeses, rice, oilseeds, oilcakes, cotton, raw tobacco, and fruits and vegetables. Imports of most livestock products and poultry are rigidly controlled.<sup>4</sup> Imports of virtually all competitive products are restricted by discretionary licensing. Unrestricted licensing applies to imports of milk powder for industrial use. However, skim milk powder imported for non-industrial use has a minimum duty.

The most important bilateral agreements between Denmark and other EFTA countries are with the United Kingdom. These annual agreements establish the quantities and prices of Danish butter, bacon, and poultry meat exports. An important agreement between Sweden and Denmark applies to certain meat products. The Swedish levies on some Danish meat imports are refunded to Denmark and placed in a Rationalization Fund. Bilateral agreements between Denmark and the EEC have applied to animals exported from Denmark for processing. Several trade agreements are in effect between Denmark and Eastern Europe as well.

## AGRICULTURAL PRODUCTION

Agricultural production has increased sharply since 1950 along with overall expansion throughout the economy. Agricultural protectionism in foreign markets has encouraged Danish agriculture to become specialized--particularly in livestock production, which dominates the output pattern and upon which most export revenues depend.

### Crops

Production of grains has increased substantially since the early 1950's, largely because of considerable expansion in area. However, yields have also increased. Yields of wheat, rye, and barley are among the highest in Western Europe. Most of the

coarse grains produced are used as livestock feed. Since the mid-1960's, production of wheat, rye, and mixed grain has decreased, while production of barley has increased greatly (see table 2). By 1967, barley output, at about 4.4 million tons, was over 50 percent higher than in 1960. Barley is mainly used as feed for hogs and accounts for approximately 70 percent of total grains used for feed. A small percentage of total output is used for malt or is exported as malting barley.

The declining production of wheat and rye is partly due to increased use of barley and oilcakes and other high protein feed supplements in Denmark.

Sugarbeets, produced in Denmark for about 100 years, are the principal root crop. Since 1965, sugarbeet production for refining has averaged around 2 million tons. Denmark usually is self-sufficient in sugar production and frequently exports small quantities. Since 1932, the sugar industry has been a Government-regulated monopoly; the Government fixes area to be planted and guarantees prices for sugarbeets. As a result of low world market prices, the Government recently established upper limits on price-supported production. The bulk of sugarbeet output is used for feed; since 1960, feed root production (largely sugarbeets) has trended downwards (see table 2).

Potato production has declined sharply since 1960, due largely to reduced area and lower per capita consumption. As table 2 indicates, potato production declined by half between 1960 to 1967. In Denmark, potatoes are grown extensively for industrial use (particularly by the alcoholic beverage industry) and for feed and seed.

Rapeseed is the major oilseed produced in Denmark, although area and output have declined in recent years. No longer considered desirable for margarine production in Denmark, large quantities of rapeseed are now exported.

Denmark produces fruits and vegetables, as well as other horticultural products and seeds, largely for the home market. Sales for the domestic market are regulated under a scheme which insures that only quality products are sold. The principal vegetables produced commercially are cabbage, carrots, cucumbers, cauliflower, and peas. Some vegetables, such as tomatoes, are grown almost exclusively under glass. Fruit production is dominated by apples, although pears, plums, and berries are common, having increased in importance since the early 1950's. The Danish fruit and vegetable market is open to imports under quantitative regulations during seasonal import periods.

### Livestock Production

Pork production has played a vital role in Denmark's agricultural economy. The value of pork production is nearly equal to the combined production value of milk, beef, and veal. Nearly all Danish hogs are of a special meat type, the Danish Landrace. Hog raising is evenly distributed throughout the country. A considerable proportion of feed for hogs is produced domestically. Barley is an important feed and, together with skim milk and whey, accounts for an important interlinking of the dairy, grain, and livestock industries.

Hog numbers have risen sharply since World War II, reaching a record 8.6 million in 1965 and fluctuating at high levels since then (table 3). Although hogs are generally raised on small-sized holdings, there has been a trend toward fewer but larger units in recent years.

Cattle numbers increased throughout the 1950's to a record level of 3.6 million in 1960 (table 3). Since 1960, cattle numbers have gradually trended downward, largely because of declining numbers of dairy cows.

Denmark's dairy herd is dominated by the Red Danish breed (50 percent of the herd) and the Black and White (30 percent). Jerseys account for most of the remainder.



Table 2.--Denmark: Production of principal agricultural commodities, 1960-67

Commodity	: 1960	: 1961	: 1962	: 1963	: 1964	: 1965	: 1966	: 1967 <sup>1/</sup>
	:	:	:	:	:	:	:	:
	- - <u>1,000 metric tons</u> - -							
	:	:	:	:	:	:	:	:
Grains:	:	:	:	:	:	:	:	:
Wheat.....	320	434	644	495	541	564	400	421
Rye.....	454	514	513	319	292	265	136	118
Barley.....	2,801	2,808	3,299	3,399	3,900	4,125	4,159	4,385
Oats.....	681	684	609	671	821	780	864	905
Mixed grains.....	727	759	719	619	659	479	401	328
Total grains.....	4,983	5,199	5,784	5,503	6,213	6,213	5,960	6,157
	:	:	:	:	:	:	:	:
Root crops:	:	:	:	:	:	:	:	:
Sugarbeets <sup>2/</sup> .....	2,230	1,397	1,440	2,598	3,154	1,883	2,159	1,961
Potatoes.....	1,963	1,490	1,162	1,334	1,213	937	972	874
Other (feed roots) <sup>3/</sup> .....	23,986	21,473	17,262	17,730	17,990	15,078	16,685	---
Total root crops.....	28,179	24,360	19,864	21,662	22,357	17,898	19,816	---
	:	:	:	:	:	:	:	:
Livestock products:	:	:	:	:	:	:	:	:
Beef and veal <sup>4/</sup> .....	254	251	277	294	244	245	257	263
Pork <sup>4/</sup> .....	651	670	682	695	738	807	792	790
Lamb and mutton <sup>4/</sup> .....	1	1	1	1	1	1	1	1
Total red meat.....	905	922	960	990	983	1,053	1,050	1,054
	:	:	:	:	:	:	:	:
Poultry meat <sup>5/</sup> .....	46	63	69	64	76	66	68	66
Eggs (million units).....	2,368	2,168	1,938	1,780	1,700	1,531	1,599	1,551
Butter.....	167	171	167	149	156	166	160	154
Milk <sup>6/</sup> .....	5,399	5,524	5,355	5,086	5,233	5,367	5,306	5,209

<sup>1/</sup> Preliminary.<sup>2/</sup> Beets for sugar production.<sup>3/</sup> Mainly sugarbeets for feed, rutabaga, mangels, turnips, and carrots.<sup>4/</sup> Carcass weight. Includes offals, and the meat equivalent of exported animals for slaughter.<sup>5/</sup> Ready to cook basis.<sup>6/</sup> Cow's milk only.

Source: Landbrugsstatistik (annual), The Statistics Department, Copenhagen.



Table 3.--Denmark: Livestock numbers, July census, 1960-67

Animals	Unit	1960	1961	1962	1963	1964	1965	1966	1967 <sup>1/</sup>
Cattle.....	Mil.	3.6	3.5	3.3	3.3	3.4	3.3	3.4	3.3
(dairy cows).....	Do.	(1.5)	(1.5)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.3)
Hogs .....	Do.	6.1	7.1	7.2	7.3	8.0	8.6	8.1	8.4
Chickens.....	Do.	24.5	30.6	29.0	25.3	25.0	20.3	20.5	18.2
Sheep.....	Thou.	44	47	52	61	71	93	112	122

<sup>1/</sup> Preliminary.

Source: Landbrugsstatistik (annual), The Statistics Department, Copenhagen.

Chicken numbers increased to a high of about 31 million in 1961 but declined sharply to around 20 million by 1967. Output of poultry has increased rapidly since the late 1950's; however, lower export earnings and rising costs of production are expected to result in declining production of poultry meat.

Sheep raising is relatively insignificant in Denmark, although numbers have increased since 1960 (table 3).

Denmark, although one of the world's smallest countries, is one of the world's largest pork producers. Production of pork, which accounts for around 80 percent of total red meat production, has steadily increased since World War II to an average of about 800,000 tons in 1965-67. Nearly three-fourths of pork production is exported--largely to the United Kingdom in the form of salted Wiltshire sides. Large quantities of fresh, chilled, and frozen pork are also produced. About 20 percent of hog production is delivered to slaughterhouses for processed hams and sausages.

Beef and veal production, although still below the record level of 294,000 tons in

1963, increased each year during 1964-67 (table 2). Approximately two-thirds of beef and veal production is exported, including live animals for slaughter. Specialized beef and veal production is rare; in most instances, the higher production reflects not only increased demand for beef and veal, but also higher slaughter rates of dairy cows when dairy revenues decline.

Total milk production, which averaged about 5.3 million tons in 1950-54, has not varied significantly since then (table 2). The average milk yield of recorded cows, which represent 60 percent of total cow numbers, is about 10,100 pounds annually. Higher milk yields have generally been sufficient to offset declining milk cow numbers.

About 60 percent of total milk production has been used for butter in recent years. Approximately 15 percent is used to produce cheese. Although there has been increased use of milk for cheese over the long run, export difficulties for some varieties of cheese have resulted in some processors switching from cheese to canned and dried milk products. Butter production has declined gradually since 1965, due to increased

industrial and home use of margarine. Rising production costs have caused producers to

seek higher export prices, particularly within the Danish-British quota agreement.

## AGRICULTURAL TRADE AND TRADE WITH THE UNITED STATES

### Imports

Danish imports of agricultural products represent around 15 percent of total imports. The principal agricultural commodities imported (table 4) are grains and preparations (largely feedgrains); other animal feeds (mainly oilcake and meal); tobacco; fruits and vegetables; hides and skins; coffee, cocoa, and tea; and animal and vegetable oils.

The United States is the principal supplier of agricultural commodities to Denmark, supplying an average of about 25 percent of the total imports in 1965-67 (table 4). The value of imports of agricultural products from the United States is generally about the same as the combined value of imports from EFTA and the EEC. Denmark is the principal importer of U.S. agricultural products in Scandinavia, and second only to the United Kingdom among the EFTA countries.

Soybeans are the most important commodity sent by the United States to Denmark; at \$50 million in 1967, they represented about 45 percent of the value of all agricultural commodities imported from the United States (table 4). The United States supplies virtually all the soybeans imported by Denmark, and around 80 percent of total Danish imports of oilseeds in normal years.

The United States is also Denmark's major source of unmanufactured tobacco, supplying nearly 50 percent of total Danish tobacco imports in 1967 (table 4). Despite the high internal taxes on tobacco products which prevail in Denmark, the demand for unmanufactured tobacco is projected to increase. Danish exports of tobacco products were favored by the reduction of EFTA tariffs

on tobacco products in 1967. Other important suppliers of tobacco and tobacco products to Denmark are Indonesia and Brazil.

Imports of grains, particularly wheat, have declined since the 1950's because of increased domestic grain production and declining numbers of dairy cows. Feedgrain imports averaged around \$45 million annually from 1965 to 1967, with the U.S. supplying about \$20 million annually. The United States normally supplies nearly all the corn imported by Denmark. Argentina and Brazil ship small quantities of corn to Denmark. Although the United States is an important source of barley imported by Denmark, the U.S. share of such imports has declined since 1965. The United Kingdom is Denmark's major supplier of barley. Through 1967, the rapid expansion of home-produced barley did not affect import demand, as total utilization of feed barley continued to increase. Denmark's anticipated self-sufficiency in barley is expected to reduce the demand for imports. When permitted, the United States generally supplies about one-third of the rye imported for blending in flour.

Denmark imports fresh apples and pears from the United States during the import season. The United States competes with Australia and Argentina for apples, and Italy for pears. The total value of Danish imports of fruits and vegetables has not varied significantly in recent years (table 4), and the U.S. share of this category was about 17 percent, or \$9 million, in both 1966 and 1967. However, the share of apples imported from the United States has increased.

A rather large proportion of Danish needs for other products, such as various types of canned and dried fruit, canned fruit

Table 4.--Denmark: Principal agricultural imports, total and U.S. share, 1965-67

SITC :	Commodity :	1965 :		1966 :		1967 :	
No. 1/ :	:	Total :	From U.S. :	Total :	From U.S. :	Total :	From U.S. :
- - <u>Million dollars</u> - -							
04 :	Grains and preparations. . . . :	61	25	65	27	59	20
:	(Feedgrains). . . . . :	(42)	(24)	(49)	(26)	(46)	(10)
:	(Barley, unmilled) . . . . . :	(21)	(10)	(26)	( 9)	(25)	( 7)
:	(Corn, unmilled). . . . . :	(11)	(10)	(14)	(13)	(14)	(10)
05 :	Fruits and vegetables . . . . :	47	8	55	9	54	9
07 :	Coffee, cocoa, teas, spices .:	58	--	60	--	58	--
08 :	Animal feed <u>2/</u> . . . . . :	88	20	97	17	81	12
121 :	Unmanufactured tobacco. . . :	34	13	29	13	29	14
21 :	Hides and skins . . . . . :	30	1	32	1	27	--
22 :	Oilseeds, nuts, kernels . . . :	59	45	49	35	61	51
:	(Soybeans) . . . . . :	(45)	(45)	(35)	(35)	(52)	(50)
29 :	Crude animal and vegetable :						
:	oil, n.e.c.. . . . . :	23	1	26	2	25	2
:	Other . . . . . :	32	3	31	2	34	4
:	:						
:	Total agricultural imports:	432	116	444	106	428	112
:	(From EFTA). . . . . :	(30)		(46)		(46)	
:	(From EEC). . . . . :	(74)		(74)		(69)	
:	:						
:	Nonagricultural imports .:	2,379	124	2,546	128	2,717	158
:	:						
:	Total imports. . . . . :	2,811	240	2,990	234	3,145	270
:	:						

1/ Standard International Trade Classification.

2/ Mainly oilcake and meal.

Sources: OECD, Commodity Trade Series C; United Nations, Commodity Trade Statistics, Series D; Danish Statistical Department, Monthly Bulletin of Foreign Trade (Dec. Issues).

juices, and processed foods, are filled by the United States.

### Exports

Danish agricultural exports have been traditionally concentrated in two principal markets, the United Kingdom, an EFTA partner, and West Germany, a member of the EEC. The United Kingdom takes about half of Denmark's agricultural exports, principally

pork and butter. Since the late 19th century, Germany has been a major purchaser of beef and veal, and live animals for slaughter. In recent years, however, the West German share of imports from Denmark has declined. The entire European market, including East Germany, absorbs over 80 percent of Danish agricultural exports.

As table 5 indicates, exports of agricultural products have not kept pace with non-

Table 5.--Denmark: Principal agricultural exports, 1965-67

SITC No. 1/	Commodity	1965	1966	1967
- - <u>Million dollars</u> - -				
00	: Live animals. . . . .	89	61	39
01	: Meat and meat preparations. . . . .	525	596	579
	: (Beef and veal) 2/ . . . . .	(134)	(119)	(115)
	: (Pork) 2/ . . . . .	(300)	(330)	(310)
	: (Dressed poultry) . . . . .	(30)	(28)	(26)
02	: Dairy products and eggs . . . . .	225	219	220
	: (Butter). . . . .	(113)	(108)	(102)
	: (Cheese) . . . . .	(56)	(60)	(62)
	: (Milk and Cream) 3/ . . . . .	(43)	(38)	(44)
	: (Eggs). . . . .	(12)	(13)	(12)
04	: Grains and grain preparations . . . . .	42	37	30
05	: Fruits and vegetables . . . . .	13	14	13
06	: Sugar and sugar preparations. . . . .	12	9	5
08	: Animal feeds 4/ . . . . .	37	38	43
21	: Hides, skins, furs, undressed. . . . .	51	66	55
	: Other. . . . .	78	73	90
	: Total agricultural exports . . . . .	1,072	1,113	1,074
	: (To EFTA) . . . . .	(520)	(566)	(555)
	: (To EEC) . . . . .	(311)	(288)	(241)
	: Total nonagricultural exports . . . . .	1,201	1,274	1,409
	: Total exports . . . . .	2,273	2,387	2,483

1/ Standard International Trade Classification.

2/ Including animals for slaughter.

3/ Evaporated, condensed, powdered, and fresh.

4/ Mainly oilmeals, meat and fish meals, and feed roots.

Sources: OECD, Commodity Trade Series C; United Nations, Commodity Trade Statistics, Series D; Danish Statistical Department, Monthly Bulletin of Foreign Trade (Dec. Issues).

agricultural exports. Regional economic groupings of countries in Western Europe largely account for this decline, and have resulted in significant changes in trade patterns for Danish agricultural products. Although the value of total exports from Denmark to the EEC has increased in recent years, the major share of this increase

reflects higher-priced industrial goods; the contribution of many agricultural products has declined sharply. The EEC, which took about one-third of Denmark's agricultural exports in the early 1960's, imported about 25 percent in 1967 (table 5). The EEC tariffs particularly affected Danish exports of beef and veal (including live animals) and poultry



and eggs. Egg exports to West Germany, Denmark's most important EEC customer, declined from \$27 million in 1960 to \$6 million in 1967 (table 6). During this same period, poultry meat exports to West Germany dropped by \$17 million to \$3 million; exports of beef, veal, and cattle fell to \$25 million from \$63 million in 1960.

A 1967 Danish Government report, entitled "Denmark and the European Communities," states that Danish membership in the EEC might result in stimulated exports of certain livestock and livestock products, and bring higher prices to Danish producers. Producer prices in Denmark are generally lower than those in the EEC countries. The report concludes that membership might result in additional annual income of over \$200 million annually to Danish farmers.

Denmark is attempting to diversify export markets outside the EEC, and such countries as Spain, Czechoslovakia, Turkey, Bulgaria, and Romania are growing customers for Danish live cattle exports. Although about half of Denmark's cheese exports are shipped to the EEC, Japan, Australia, Canada, East

Germany, Greece, and the United States are growing markets.

Although no provisions for reducing the tariffs on agricultural commodities have been established in the EFTA regulations, Danish agricultural exports are increasingly directed at EFTA member countries, and in recent years their share has increased to around 50 percent (table 5). Part of the increase is due to a growing importance of Scandinavian trade under bilateral agreements within the EFTA regulations. Denmark's exports to Sweden have increased, due partly to Sweden's policy of gradually lowering domestic production of some agricultural products.

The United States is Denmark's major customer for canned hams, frequently importing twice as much as the United Kingdom, which ranks second. As table 6 indicates, Danish exports of canned meats (mainly hams) to the United States have trended upwards since 1960, and were \$74 million in 1967, or over half of total canned meat exports. Other major markets for Danish canned meat products are Okinawa, Canada, Puerto Rico, Hong Kong, and West Germany.

Table 6.--Denmark: Principal agricultural exports by main country of destination, 1960 and 1964-67

Commodity	Country of destination	1960	1964	1965	1966	1967
			- - Million dollars - -			
Butter	United Kingdom	83	96	99	99	98
	West Germany	2	2	4	4	2
Cheese	West Germany	20	26	25	27	27
	United Kingdom	7	7	7	7	7
	United States	4	4	5	9	10
Eggs	West Germany <u>1/</u>	27	8	9	8	6
	United Kingdom	4	1	2	2	2
Poultry Meat	United Kingdom	2	6	8	5	7
	West Germany	20	18	8	7	3
	Austria	--	1	2	3	3
	Switzerland	--	3	3	3	3
Beef and veal, and cattle	Italy <u>2/</u>	37	54	48	44	47
	West Germany <u>3/</u>	63	58	62	40	25
	East Germany	2	2	3	6	11
Hogs, pork and bacon	United Kingdom	198	227	223	262	249
	West Germany	15	12	16	18	12
Canned meats <u>4/</u>	United States	32	45	62	85	74
	United Kingdom	26	28	32	36	38
	All countries <u>5/</u>	72	99	124	151	146

1/ Including U.S. military in West Germany.

2/ Mostly beef and veal.

3/ Mostly cattle for slaughter.

4/ Mainly canned pork products.

5/ Totals for other commodities are in table 3.

Sources: Economic Survey of Denmark (annual); Ministry of Foreign Affairs, Copenhagen; United Nations, Commodity Trade Statistics, Series D.

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